

GRAND CROSS OF THE LEGION OF HONOUR

French President Emmanuel Macron recently conferred his country's highest honour, the Grand Cross of the Legion of Honour, upon the Indian Prime Minister.



About Grand Cross of the Legion of Honour:

- **What is it?** The National Order of the Legion of Honour, or simply The **Legion of Honour** is the highest French decoration, both civil and military, and is one of the most famous national honours in the world.
- **Five Degrees:** The Legion of Honour has five degrees of increasing distinction: three ranks — Chevalier (Knight), Officier (Officer), and Commandeur (Commander) — and two titles — Grand Officier (Grand Officer) and Grand-croix (Grand Cross). The Prime Minister has been honoured with the highest French honour, akin to the Bharat Ratna in India.
- **Origin:** The Order was established by Napoleon Bonaparte in 1802, and has been presented for more than the past two centuries on behalf of the French Head of State to its most deserving citizens in all fields of activity.
- **Are foreigners eligible?** Foreigners may be decorated with the Legion of Honour “if they have rendered services (e.g., cultural or economic) to France or supported causes defended by France, such as human rights, freedom of the press, or humanitarian action”.
- **The motto** of the Order is: **Honneur et Patrie, French for Honour and Fatherland.**

Award:

- There is **no material or financial benefit** attached to the award.
- **The award badge** is a five-armed Maltese asterisk hung on an oak and laurel wreath.
- On the obverse is the effigy of the Republic and on the reverse two tricolour flags surrounded by the motto. **The colour of the ribbon is red.**

CHANDRAYAAN-3 LAUNCHED

Why in news?

- The Indian Space Research Organisation launched its third lunar mission - **Chandrayaan 3** on-board the heavy lift LVM3-M4 rocket in Sriharikota on July 14.
- The Vikram lander of the mission is planned to soft land on the surface of the South Pole region of the Moon on August 23.
- A successful mission would see India enter an elite club of nations achieving such a feat. These nations are: the United States, China and the former Soviet Union.

Chandrayaan 3

• About

- The Chandrayaan-3 is India's third lunar mission.
- It consists of an indigenous lander module (LM), propulsion module (PM), and a rover.
- Its objective is to develop and demonstrate new technologies required for inter-planetary missions.

• Modules

- The Chandrayaan-3 mission spacecraft will have three modules —Propulsion, lander, and rover.
- The propulsion module is the one that will take the lander and the rover to the moon.
- The lander module contains the rover. After the touchdown, the lander will remain stationary at the landing site, while the rover will explore the moon.

• Payloads

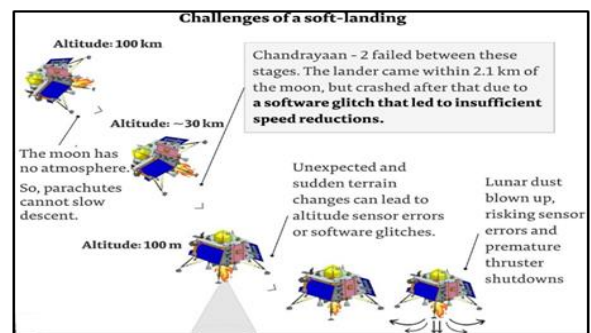
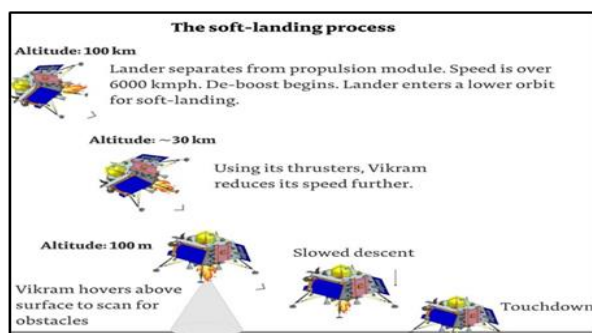
- The Chandrayaan-3 carries six payloads that would help ISRO understand the lunar soil and also get the blue planet's photographs from the lunar orbit.
- **Lunar lander Vikram** will click photos of the **rover Pragyaan** as it studies the seismic activity on the moon by dropping some instruments.
- Using laser beams, it would try to melt a piece of the lunar surface -- the regolith -- to study the gases emitted during the process.

ISRO's previous moon missions

- Chandrayaan-3 is largely a replica of its predecessor, Chandrayaan-2, that was launched in July 2019 in the form of an orbiter and a lander ('Vikram') bearing a rover ('Pragyan').
- Chandrayaan-1 was launched by ISRO in October, 2008.
- The ISRO lost communication with Chandrayaan-1 on August 29, 2009, almost a year after it was launched.

Soft Landing

- A soft landing on the Moon's surface refers to a controlled and gentle touchdown of a spacecraft or lunar lander on the lunar terrain.
- During a soft landing, the spacecraft undergoes a series of manoeuvres and braking techniques to reduce its velocity and align itself with the landing site.
- This typically involves firing retro-rockets or thrusters to slow down the descent and make a controlled approach.
- The goal is to land the spacecraft gently without causing any significant damage.
- **Process of soft landing for Chandrayaan-3**
- Following the separation from the launch vehicle, the propulsion module along with the lander would proceed for an over a month-long journey towards reaching the orbit of the moon until it goes 100 km above the lunar surface.
- After reaching the desired altitude, the lander module would begin its descent for a soft landing on the moon's south pole region.



What happened to Chandrayaan 2?

- During this mission, ISRO lost contact with the spacecraft's lander Vikram.

- While the orbiter entered into orbit around the moon, the surface mission failed when the lander crashed instead of executing a slow descent.
- ISRO later identified a problem in the guidance software and unexpected dispersion in the propulsion system during certain phases of the descent.

How will Chandrayaan-3 be different?

- In Chandrayaan-3, the rocket will place the payload in an elliptical orbit around the earth, where a propulsion module will take over and pilot the lander to a circular orbit around the moon.
- To improve the chances of success at this stage, ISRO has strengthened the lander's legs, lowered its minimum thrust, enhanced the availability of power, and upgraded the landing sequence.

ASSOCIATION OF WORLD ELECTION BODIES (A-WEB)

Recently, Chief Election Commissioner of India led a three-member Election Commission of India (ECI) delegation to Cartagena, Colombia to attend the 11th meeting of the Executive Board of the Association of World Election Bodies (A-WEB).



About Association of World Election Bodies (A-WEB):

- It is the largest association of Election Management Bodies (EMBs) worldwide.
- It was founded in October, 2013 in Seoul, Republic of Korea.
- **Theme of 2023 meeting:** "A global view on the challenges of regional elections 2023".

Vision: The shared vision among its members of **achieving sustainable democracy around the world** through the strengthening of the processes of election management in member countries.

- **Members:** It consists of **119 EMBs as Members** & 20 Regional Associations/Organisations as Associate Members.
- **India is a member** of this association and is represented by the Election Commission of India (ECI)

- ECI took over as **Chairperson for 2019-22 term** and is presently a member of its Executive Board for 2022-24 in its capacity as immediate former Chair of A-WEB.
 - In India **A-WEB Centre** has been **established at New Delhi** for documentation and research for sharing the best practices and training and capacity building of officials of A-WEB members.
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WHAT IS THE RUBBER BOARD?

The Central Government has dismissed concerns over a new Rubber Bill and existence of the Rubber Board.



About Rubber Board:

- It is a **statutory organization** constituted under the **Rubber Act, 1947**.
- It functions under the **administrative control of the Ministry of Commerce and Industry**.
- **Functions:**
 - The Board is responsible for the **development of the rubber industry** in the country by **assisting and encouraging research, development, extension and training activities** related to rubber.
 - It also **maintains statistical data of rubber**, takes steps to **promote marketing of rubber** and undertake **labour welfare activities**.
 - A **crucial function** of the Rubber Board is **issuing licenses to rubber producers, manufacturers, and exporters/traders**. This license, known as the "**Rubber Board license/registration**," is **mandatory for anyone involved in rubber manufacturing and export**

Structure:

- The Board is **headed by a Chairman appointed by the Central Government**.
 - It has **28 members representing various interests of the natural rubber industry**.
 - **Headquarters: Kottayam, Kerala**.
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- The activities of the Board are exercised through Five Departments viz. General Services, Extension & Advisory Services, Research Services (rubber Research Institute of India), Training (Rubber Training Institute) & Finance.
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WHAT IS K-9 VAJRA?

The Indian Army is planning to introduce the Made in India K-9 Vajra self-propelled artillery guns in the Eastern Ladakh sector where it has already equipped its troops with Spike missiles.



About K-9 Vajra:

- It is a **155 mm, 52-caliber tracked self-propelled artillery system.**
- It is built by **Larsen & Toubro** with technology transferred from South Korean defence major Hanwha Défense based on its K9 Thunder.
- **Features:**
 - It has **all-welded steel armour up to 19mm thick.**
 - The **main weapon is the 155mm / 52 calibre gun.**
 - It has a **burst rate of fire of three rounds per 15 seconds** and a **maximum rate of fire of six to eight rounds a minute** for three minutes.
 - **Range: 40 km**
 - The K9 uses a **digital fire control system**, by which it can fire multiple rounds that can impact a given area at the same time.

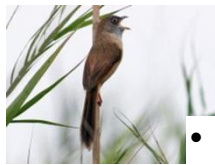
Key facts about Spike missile:

- Spike is a **fire-and-forget anti-tank guided missile (ATGM).**
 - The Spike family of ATGMs are developed by **Rafael Advanced defence Systems**, a defence technology company based in Israel.
 - Spike missiles are being used by the defence forces of Israel and another **38 countries, including India**, Netherlands, Romania, Chile, Colombia, Finland, Germany, Poland.
 - **Features:**
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- These are **lightweight, fire-and-forget tactical precision-guided missiles** using **electro-optical (EO) and fibre-optic technologies**.
- It has the **ability to penetrate around one meter of armour** and can be operated in either **“direct attack or mid-course navigation** based on target coordinates only.
- The **missile has an inbuilt seeker**, which gives the firer the **flexibility to use any of two modes: Day (CCD) and Night (IIR)**. The dual seeker adds to the missile's reliability.

WHAT IS JERSON'S BABBLER?

A rare and globally endangered bird species 'Jerdon's Babbler' was recently spotted in the buffer zone of the Dudhwa Tiger Reserve (DTR).



About Jerdon's Babbler:

- Jerdon's babbler is a **passerine bird native to wetlands and grasslands of the Indian subcontinent**.
 - **Scientific Name: Chrysomma altirostre**
 - It is a member of the **genus Chrysomma** of the **family Paradoxornithidae**.
 - **Geographic Distribution: Bangladesh, India, Myanmar, Nepal, Pakistan.**
 - **Habitat:** It lives all-year-round **near river courses**, where it **inhabits dense reedbeds and tall grasslands**.
 - **Features:**
 - It has **rich brown upperparts** and a **long brownish-red tail**.
 - The **legs and feet are dark**, the **bill is greyish-horn colored above and pale below**.
 - The eyes' **irides are yellowish-brown** and a **thin nude ring of greenish-yellow skin surrounds the eye**.
 - **Conservation Status:**
 - IUCN Red List: **Vulnerable**
- What is a passerine bird?**
- A passerine is a **perching bird in the formal scientific order Passeriformes**.

- These are the **most familiar, typical birds** and the term can be applied to **more than half the world's unique bird species**, including all the classic songbirds, sparrows, and finches.

Key Facts about Dudhwa Tiger Reserve (DTR):

- **Location:** It is located on the **Indo-Nepal border** in the district Lakhimpur-Kheri in **Uttar Pradesh**.
- It comprises **Dudhwa National Park (DNP)** and **Kishanpur and Katarniaghat wildlife sanctuaries**.
- **Rivers:** The **Sharda River** flows by the **Kishanpur WL Sanctuary**, the **Geruwa River** flows through the **Katerniaghat WL Sanctuary** and the **Suheli and Mohana streams** flow in the **Dudhwa National Park**, all of which are **tributaries of the mighty Ghagra River**.
- The Dudhwa National Park is a **typical Tarai-Bhabar habitat** of the **upper Gangetic plains' Biogeographic province**.
- **Flora:** The vegetation is of the **North Indian Moist Deciduous type**, containing some of the finest examples of **Sal forests (Shorea robusta) in India**.
- **Fauna:** **Tiger, Langu, Smooth Indian Otter, Hog Deer, Mugger, Gharial, Python, Sandboa, Banded krait, Russel's viper, Rat snake** etc.

WHAT IS PARKINSON'S DISEASE?

Neuroscientists recently found that intensive exercise could slow the course of Parkinson's disease.



About Parkinson's Disease:

- It is a **progressive neurological disorder** that affects the **nervous system and the parts of the body controlled by the nerves**.
- It is a condition in which a **patient holds limited or no control over his movements** and body balance.
- It occurs and progresses with ageing, but in rare cases, it is also witnessed among **children and teenagers** as well.

- **Currently, there is no cure for Parkinson's disease.**
 - Many studies have suggested that **men are more likely to be affected** by Parkinson's than women.
 - **Cause:**
 - Parkinson's disease is **caused by the degeneration of nerve cells** in the part of the brain called the substantia nigra, **which controls movement.**
 - These **nerve cells die or become impaired, losing the ability to produce an important chemical called dopamine.**
 - **Dopamine operates with other neurotransmitters to help coordinate the millions of nerve and muscle cells** involved in the movement.
 - **Symptoms:**
 - **Tremors** (trembling in the hands, arms, legs, and jaw); rigidity (stiffness of the limbs); **slowness of movement; and impaired balance and coordination.**
 - Parkinson's patients may also experience **other symptoms such as difficulty in swallowing, chewing, and speaking, urinary problems, constipation, skin problems, depression, emotional changes, and sleep disruption.**
 - **Currently, no blood laboratory or radiological tests are available to diagnose Parkinson's disease.**
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